

Clean Copy of Claims, as Amended in the Supplementary Amendment

1. An isolated nucleic acid molecule selected from the group consisting of:
 - a) a nucleic acid molecule having a nucleotide sequence which is at least 90% identical to the nucleotide sequence of any one of SEQ ID NO: 59, SEQ ID NO: 60, and the nucleotide sequence of the cDNA clone deposited with ATCC® as Accession number PTA-151, or the complement of any of these nucleic acid molecules;
 - b) a nucleic acid molecule comprising at least 400 nucleotide residues and having a nucleotide sequence identical to at least 400 consecutive nucleotide residues of any one of SEQ ID NO: 59, SEQ ID NO: 60, and the nucleotide sequence of the cDNA clone deposited with ATCC® as Accession number PTA-151, or the complement of any of these nucleic acid molecules;
 - c) a nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by the cDNA clone deposited with ATCC® as Accession number PTA-151, or the complement of any of these nucleic acid molecules; and
 - d) a nucleic acid molecule which encodes a fragment of a polypeptide comprising the amino acid sequence of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by the cDNA clone deposited with ATCC® as Accession number PTA-151, wherein the fragment comprises at least 200 consecutive amino acid residues of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by the cDNA clone, or the complement of any of these nucleic acid molecules.

24. The isolated nucleic acid molecule of claim 1, having a nucleotide sequence which is at least 90% identical to the nucleotide sequence of any one of SEQ ID NO: 59, SEQ ID NO: 60, and the nucleotide sequence of the cDNA clone deposited with ATCC® as Accession number PTA-151, or the complement of any of these nucleic acid molecules.

25. The isolated nucleic acid molecule of claim 24, having a nucleotide sequence which is at least 98% identical to the nucleotide sequence of any one of SEQ ID NO: 59, SEQ ID NO: 60, and the nucleotide sequence of the cDNA clone deposited with ATCC® as Accession number PTA-151, or the complement of any of these nucleic acid molecules.

26. The isolated nucleic acid molecule of claim 24, having a nucleotide sequence at least 98% identical to SEQ ID NO: 59 operably linked within a recombinant expression vector.

27. The isolated nucleic acid molecule of claim 24, having a nucleotide sequence identical to the nucleotide sequence of any one of SEQ ID NO: 59, SEQ ID NO: 60, and the nucleotide sequence of the cDNA clone deposited with ATCC® as Accession number PTA-151, or the complement of any of these nucleic acid molecules.

28. The isolated nucleic acid molecule of claim 24, having a nucleotide sequence identical to either of SEQ ID NOs: 59 and 60 operably linked with a recombinant expression vector.

29. The isolated nucleic acid molecule of claim 1, comprising at least 400 nucleotide residues and having a nucleotide sequence identical to at least 400 consecutive nucleotide residues of any one of SEQ ID NO: 59, SEQ ID NO: 60, and the nucleotide sequence of the cDNA clone deposited with ATCC® as Accession number PTA-151, or the complement of any of these nucleic acid molecules.

30. The isolated nucleic acid molecule of claim 29, comprising at least 650 nucleotide residues and having a nucleotide sequence identical to at least 650 consecutive nucleotide residues of any one of SEQ ID NO: 59, SEQ ID NO: 60, and the nucleotide sequence of the cDNA clone deposited with ATCC® as Accession number PTA-151, or the complement of any of these nucleic acid molecules.

31. The isolated nucleic acid molecule of claim 29, having a nucleotide sequence identical to at least 650 consecutive nucleotide residues of SEQ ID NO: 59 operably linked within a recombinant expression vector.

32. The isolated nucleic acid molecule of claim 1, which encodes a polypeptide comprising the amino acid sequence of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by the cDNA clone deposited with ATCC® as Accession number PTA-151, or the complement of any of these nucleic acid molecules.

33. The isolated nucleic acid molecule of claim 32, operably linked within an expression vector.

34. The isolated nucleic acid molecule of claim 1, which encodes a fragment of a polypeptide comprising the amino acid sequence of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by the cDNA clone deposited with ATCC® as Accession number PTA-151, wherein the fragment comprises at least 200 consecutive amino acid residues of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by the cDNA clone, or the complement of any of these nucleic acid molecules.

35. The isolated nucleic acid molecule of claim 34, wherein the fragment comprises at least 647 consecutive amino acid residues of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by the cDNA clone, or the complement of any of these nucleic acid molecules.

55. The isolated nucleic acid molecule of claim 35, wherein the fragment comprises at least 649 consecutive amino acid residues of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by the cDNA clone, or the complement of any of these nucleic acid molecules.

36. The isolated nucleic acid molecule of claim 34, wherein the fragment comprises at least 200 consecutive amino acid residues of SEQ ID NO: 61.

3. The nucleic acid molecule of claim 1, further comprising a vector nucleic acid sequence.

4. The nucleic acid molecule of claim 1, further comprising a nucleic acid sequence encoding a heterologous polypeptide.

5. A host cell which contains the nucleic acid molecule of claim 1.

6. The host cell of claim 5 which is a mammalian host cell.

7. A non-human mammalian host cell containing the nucleic acid molecule of claim 1.

16. A method for detecting the presence of a nucleic acid molecule of claim 1 in a sample, comprising the steps of:

- a) contacting the sample with a nucleic acid probe or primer which selectively hybridizes with the nucleic acid molecule; and
- b) determining whether the nucleic acid probe or primer binds with a nucleic acid molecule in the sample.

17. The method of claim 16, wherein the sample comprises mRNA molecules and is contacted with a nucleic acid probe.

18. A kit comprising a compound which selectively hybridizes with the nucleic acid molecule of claim 1 and instructions for use, wherein the compound comprises a polynucleotide that comprises at least 40 nucleotide residues and that hybridizes with the nucleic acid molecule under stringent hybridization conditions, wherein the stringent hybridization conditions comprise hybridization in 6 \times sodium chloride/sodium citrate (SSC) at 45°C, followed by one or more washes in 0.2 \times SSC, 0.1% SDS at 65°C.

41. The kit of claim 18, wherein the nucleic acid molecule has a nucleotide sequence which is identical to the nucleotide sequence of any one of SEQ ID NO: 59, SEQ ID NO: 60, and the nucleotide sequence of a cDNA clone deposited with ATCC® as Accession number PTA-151, or the complement of any of these nucleic acid molecules.

42. The kit of claim 18, wherein the nucleic acid molecule has a nucleotide sequence which is identical to the nucleotide sequence of SEQ ID NO: 59 or the complement thereof.

37. An isolated nucleic acid molecule selected from the group consisting of:

a) a nucleic acid molecule having a nucleotide sequence which is at least 90% identical to the nucleotide sequence of any one of SEQ ID NO: 59, SEQ ID NO: 60, and the nucleotide sequence of the cDNA clone deposited with ATCC® as Accession number PTA-151, or the complement of any of these nucleic acid molecules;

b) a nucleic acid molecule comprising at least 400 nucleotide residues and having a nucleotide sequence identical to at least 400 consecutive nucleotide residues of any one of SEQ ID NO: 59, SEQ ID NO: 60, and the nucleotide sequence of the cDNA clone

deposited with ATCC® as Accession number PTA-151, or the complement of any of these nucleic acid molecules;

- c) a nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by the cDNA clone deposited with ATCC® as Accession number PTA-151, or the complement of any of these nucleic acid molecules; and
- d) a nucleic acid molecule which encodes a fragment of a polypeptide comprising the amino acid sequence of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by the cDNA clone deposited with ATCC® as Accession number PTA-151, wherein the fragment comprises at least 200 consecutive amino acid residues of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by the cDNA clone, or the complement of any of these nucleic acid molecules,

wherein the nucleic acid molecule encodes a polypeptide that exhibits a biological function of TANGO 332 protein.

56. The isolated nucleic acid molecule of claim 37, wherein the biological function is selected from the group consisting of

- i) ability to bind with hyaluronic acid;
- ii) ability to modulate human brain tissue organization;
- iii) ability to modulate interaction of human brain cells with brain extracellular matrix;
- iv) ability to modulate movement of human brain cells through brain extracellular matrix;
- v) ability to modulate growth of human brain cells;
- vi) ability to modulate proliferation of human brain cells;
- vii) ability to modulate differentiation of human brain cells;

- viii) ability to modulate adhesion between human brain cells; and
- ix) ability to modulate formation of neurological connections between human brain cells.

38. The isolated nucleic acid molecule of claim 56, wherein the property is selected from the group consisting of iii) to ix) and wherein the human brain cells are glial cells.

39. The isolated nucleic acid molecule of claim 38, wherein the glial cells are cells of a glioma.

40. The isolated nucleic acid molecule of claim 39, wherein the glioma is selected from the group consisting of an astrocytoma, an endophytic retinoblastoma, an exophytic retinoblastoma, an ependymoma, a ganglioglioma, a nasal glioma, an optic glioma, a Schwannoma, and a mixed glioma.

43. The isolated nucleic acid molecule of claim 37, having a nucleotide sequence which is at least 90% identical to the nucleotide sequence of any one of SEQ ID NO: 59, SEQ ID NO: 60, and the nucleotide sequence of the cDNA clone deposited with ATCC® as Accession number PTA-151, or the complement of any of these nucleic acid molecules.

44. The isolated nucleic acid molecule of claim 37, comprising at least 400 nucleotide residues and having a nucleotide sequence identical to at least 400 consecutive nucleotide residues of any one of SEQ ID NO: 59, SEQ ID NO: 60, and the nucleotide sequence of the cDNA clone deposited with ATCC® as Accession number PTA-151, or the complement of any of these nucleic acid molecules.

45. The isolated nucleic acid molecule of claim 37, which encodes a polypeptide comprising the amino acid sequence of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by the cDNA clone deposited with ATCC® as Accession number PTA-151, or the complement of any of these nucleic acid molecules.

46. The isolated nucleic acid molecule of claim 37, which encodes a fragment of a polypeptide comprising the amino acid sequence of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by the cDNA clone deposited with ATCC® as Accession number PTA-151, wherein the fragment comprises at least 200 consecutive amino acid residues of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by the cDNA clone, or the complement of any of these nucleic acid molecules.

47. An isolated nucleic acid molecule having a length of at least 2600 nucleotide residues, wherein the nucleic acid hybridizes under stringent hybridization conditions with a nucleic acid having the sequence SEQ ID NO: 60.

48. The isolated nucleic acid molecule of claim 47, wherein the stringent hybridization conditions comprise hybridization in 6× sodium chloride/sodium citrate (SSC) at about 45°C, followed by washing in 0.2× SSC, 0.1% SDS at 65°C.

49. The isolated nucleic acid molecule of claim 48, wherein the nucleic acid molecule encodes a polypeptide that exhibits a biological function of TANGO 332 protein.

50. The isolated nucleic acid molecule of claim 49, wherein the biological function is selected from the group consisting of

- i) ability to bind with hyaluronic acid;
- ii) ability to modulate human brain tissue organization;
- iii) ability to modulate interaction of human brain cells with brain extracellular matrix;
- iv) ability to modulate movement of human brain cells through brain extracellular matrix;
- v) ability to modulate growth of human brain cells;
- vi) ability to modulate proliferation of human brain cells;

- vii) ability to modulate differentiation of human brain cells;
- viii) ability to modulate adhesion between human brain cells; and
- ix) ability to modulate formation of neurological connections between human brain cells.

51. The isolated nucleic acid molecule of claim 47, wherein the molecule has a length of at least 2800 nucleotide residues.

52. (Amended) An isolated nucleic acid molecule having a sequence that encodes a protein that includes an amino acid sequence that is at least 90% identical to SEQ ID NO: 63 and exhibits a biological function of TANGO 332 protein.

53. The isolated nucleic acid molecule of claim 52, wherein the biological function is selected from the group consisting of

- i) ability to bind with hyaluronic acid;
- ii) ability to modulate human brain tissue organization;
- iii) ability to modulate interaction of human brain cells with brain extracellular matrix;
- iv) ability to modulate movement of human brain cells through brain extracellular matrix;
- v) ability to modulate growth of human brain cells;
- vi) ability to modulate proliferation of human brain cells;
- vii) ability to modulate differentiation of human brain cells;
- viii) ability to modulate adhesion between human brain cells; and
- ix) ability to modulate formation of neurological connections between human brain cells.

54. (Amended) The isolated nucleic acid molecule of claim 52, wherein the amino acid sequence is at least 90% identical to SEQ ID NO: 63.

57. An isolated nucleic acid molecule having a length of at least 300 nucleotide residues, wherein the nucleic acid hybridizes under stringent hybridization conditions with a nucleic acid having the sequence SEQ ID NO: 60.

58. The isolated nucleic acid molecule of claim 57, wherein the stringent hybridization conditions comprise hybridization in 6 \times sodium chloride/sodium citrate (SSC) at about 45°C, followed by washing in 0.2 \times SSC, 0.1% SDS at 65°C.

59. The isolated nucleic acid molecule of claim 58, wherein the nucleic acid molecule encodes a polypeptide that exhibits a biological function of TANGO 332 protein.



**Marked-Up Copy of Claims Amended
in Response to the Office Action
Dated 1 March 2002**

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1. (Twice Amended) An isolated nucleic acid molecule selected from the group consisting of:

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- a) a nucleic acid molecule having a nucleotide sequence which is at least 90% identical to the nucleotide sequence of any one of SEQ ID NO: 59, SEQ ID NO: 60, and the nucleotide sequence of a-the cDNA clone deposited with ATCC® as Accession number PTA-151, or-a complement thereof the complement of any of these nucleic acid molecules;
- b) a nucleic acid molecule comprising at least 400 nucleotide residues and having a nucleotide sequence identical to at least 400 consecutive nucleotide residues of any one of SEQ ID NO: 59, SEQ ID NO: 60, and the nucleotide sequence of a-the cDNA clone deposited with ATCC® as Accession number PTA-151, or-a complement thereof the complement of any of these nucleic acid molecules;
- c) a nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by a-the cDNA clone deposited with ATCC® as Accession number PTA-151, or-a complement thereof the complement of any of these nucleic acid molecules; and
- d) a nucleic acid molecule which encodes a fragment of a polypeptide comprising the amino acid sequence of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by a-the cDNA clone deposited with ATCC® as Accession number PTA-151-or its complement, wherein the fragment comprises at least 200 consecutive amino acid residues of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid

sequence encoded by the cDNA clone deposited with ATCC® as Accession number PTA-151, or its complement the complement of any of these nucleic acid molecules.

18. (Amended) A kit comprising a compound which selectively hybridizes with athe nucleic acid molecule of claim 1 and instructions for use, wherein the compound comprises a polynucleotide that comprises at least 40 nucleotide residues and that hybridizes with the nucleic acid molecule under stringent hybridization conditions, wherein the stringent hybridization conditions comprise hybridization in 6× sodium chloride/sodium citrate (SSC) at 45°C, followed by one or more washes in 0.2× SSC, 0.1% SDS at 65°C.

24. (Amended) The isolated nucleic acid molecule of claim 1, having a nucleotide sequence which is at least 90% identical to the nucleotide sequence of any one of SEQ ID NO: 59, SEQ ID NO: 60, and the nucleotide sequence of athe cDNA clone deposited with ATCC® as Accession number PTA-151, or a complement thereof the complement of any of these nucleic acid molecules.

25. (Amended) The isolated nucleic acid molecule of claim 24, having a nucleotide sequence which is at least 98% identical to the nucleotide sequence of any one of SEQ ID NO: 59, SEQ ID NO: 60, and the nucleotide sequence of athe cDNA clone deposited with ATCC® as Accession number PTA-151, or a complement thereof the complement of any of these nucleic acid molecules.

27. (Amended) The isolated nucleic acid molecule of claim 24, having a nucleotide sequence identical to the nucleotide sequence of any one of SEQ ID NO: 59, SEQ ID NO: 60, and the nucleotide sequence of athe cDNA clone deposited with ATCC® as Accession number PTA-151, or a complement thereof the complement of any of these nucleic acid molecules.

29. (Amended) The isolated nucleic acid molecule of claim 1, comprising at least 400 nucleotide residues and having a nucleotide sequence identical to at least 400 consecutive nucleotide residues of any one of SEQ ID NO: 59, SEQ ID NO: 60, and the nucleotide sequence of ~~a-the cDNA clone deposited with ATCC® as Accession number PTA-151, or a complement thereof the complement of any of these nucleic acid molecules.~~

30. (Amended) The isolated nucleic acid molecule of claim 29, comprising at least 650 nucleotide residues and having a nucleotide sequence identical to at least 650 consecutive nucleotide residues of any one of SEQ ID NO: 59, SEQ ID NO: 60, and the nucleotide sequence of ~~a-the cDNA clone deposited with ATCC® as Accession number PTA-151, or a complement thereof the complement of any of these nucleic acid molecules.~~

32. (Amended) The isolated nucleic acid molecule of claim 1, which encodes a polypeptide comprising the amino acid sequence of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by ~~a-the cDNA clone deposited with ATCC® as Accession number PTA-151, or a complement thereof the complement of any of these nucleic acid molecules.~~

34. (Amended) The isolated nucleic acid molecule of claim 1, which encodes a fragment of a polypeptide comprising the amino acid sequence of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by ~~a-the cDNA clone deposited with ATCC® as Accession number PTA-151 or its complement, wherein the fragment comprises at least 200 consecutive amino acid residues of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by the cDNA clone, deposited with ATCC® as Accession number PTA-151 or its complement the complement of any of these nucleic acid molecules.~~

35. (Amended) The isolated nucleic acid molecule of claim 34, ~~which encodes a fragment of a polypeptide comprising the amino acid sequence of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by a cDNA clone deposited with ATCC®~~

as Accession number PTA-151 or its complement, wherein the fragment comprises at least 200 647 consecutive amino acid residues of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by the cDNA clone, deposited with ATCC® as Accession number PTA-151 or its complement the complement of any of these nucleic acid molecules.

36. (Amended) The isolated nucleic acid molecule of claim 34, wherein the fragment comprises at least 200 consecutive amino acid residues of SEQ ID NO: 63 61.

37. (Amended) An isolated nucleic acid molecule selected from the group consisting of:

- a) a nucleic acid molecule having a nucleotide sequence which is at least 90% identical to the nucleotide sequence of any one of SEQ ID NO: 59, SEQ ID NO: 60, and the nucleotide sequence of athe cDNA clone deposited with ATCC® as Accession number PTA-151, or-a complement thereof the complement of any of these nucleic acid molecules;
- b) a nucleic acid molecule comprising at least 400 nucleotide residues and having a nucleotide sequence identical to at least 400 consecutive nucleotide residues of any one of SEQ ID NO: 59, SEQ ID NO: 60, and the nucleotide sequence of athe cDNA clone deposited with ATCC® as Accession number PTA-151, or-a complement thereof the complement of any of these nucleic acid molecules;
- c) a nucleic acid molecule which encodes a polypeptide comprising the amino acid sequence of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by athe cDNA clone deposited with ATCC® as Accession number PTA-151, or a complement thereof the complement of any of these nucleic acid molecules; and

d) a nucleic acid molecule which encodes a fragment of a polypeptide comprising the amino acid sequence of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by ~~a-the~~ cDNA clone deposited with ATCC® as Accession number PTA-151-~~or its complement~~, wherein the fragment comprises at least 200 consecutive amino acid residues of any one of SEQ ID NO: 61, SEQ ID NO: 63, and the amino acid sequence encoded by the cDNA clone, ~~deposited with ATCC® as Accession number PTA-151 or its complement~~ the complement of any of these nucleic acid molecules,

wherein the nucleic acid molecule encodes a polypeptide that exhibits a property selected from the group consisting of

- i) ability to bind with hyaluronic acid;
- ii) ability to modulate human brain tissue organization;
- iii) ability to modulate interaction of human brain cells with brain extracellular matrix;
- iv) ability to modulate movement of human brain cells through brain extracellular matrix;
- v) ability to modulate growth of human brain cells;
- vi) ability to modulate proliferation of human brain cells;
- vii) ability to modulate differentiation of human brain cells;
- viii) ability to modulate adhesion between human brain cells; and
- ix) ability to modulate formation of neurological connections between human brain cells biological function of TANGO 332 protein.

38. (Amended) The isolated nucleic acid molecule of claim ~~37~~ 56, wherein the property is selected from the group consisting of iii) to ix) and wherein the human brain cells are glial cells.